TRESTLE CREEK INN (PWSNO 1090146)
SOURCE WATER ASSESSMENT REPORT

February 21, 2003

State of Idaho
Department of Environmental Quality

SOURCE WATER ASSESSMENT FOR TRESTLE CREEK INN

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on well construction characteristics; site specific sensitivity factors associated with the aquifer the water is drawn from; a land use inventory inside the well recharge zone; and water quality history. For non-community transient water systems like Trestle Creek Inn, recharge zones were generally delineated as a 1000-foot fixed radius around the wells.

This report, *Source Water Assessment for Trestle Creek Inn* describes factors used to assess the well's susceptibility to contamination. The analysis relies on information from the well log; an inventory of land use, well site characteristics, potential contaminant sites identified through a Geographic Information System database search; and information from the public water system file. The ground water susceptibility analysis worksheet for Trestle Creek Inn is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Well Construction.

The Trestle Creek Inn well provides drinking water for a restaurant located adjacent to Highway 200 about 3 miles northwest of Hope, Idaho. The well, located in a flood plain, is about 50 feet from Trestle Creek. It was drilled at an unknown date. The 6-inch steel casing extends 41 inches above grade and was fitted with a rain cap. The system was mostly in compliance with *Idaho Rules for Public Drinking Water Systems* when it was inspected in April 2001. Necessary improvements to the wellhead outlined in the Sanitary Survey report included sealing exposed submersible wires in a conduit, and installing a vented, watertight well cap. No driller's log is available for the Trestle Creek Inn well, so several construction details used to assess vulnerability to contamination are unknown.

Well Site Characteristics.

Hydrologic sensitivity scores are derived from information on the well log and from the soil drainage classification inside the recharge zones delineated for your well. Soils in the well recharge zone delineated for Trestle Creek Inn are generally moderately to well drained. Soils in this drainage classification provide little protection against migration of contaminants toward the well. The depth of the water table and soil characteristics at the well site are not known.

Potential Contaminant Inventory.

The area around Trestle Creek Inn has been heavily developed for recreational use, including a trailer park across the highway. State Highway 200 and a rail line cross the 1000-foot buffer zone delineated as the well recharge zone. Major transportation corridors can be sources of all classes of regulated contaminants. The well is situated in the flood plain about 50 feet from Trestle Creek and needs to be evaluated to determine whether the source it draws from is hydraulically connected to the creek. Surface water can be a source of microbial contamination. Septic system components for the Inn were not counted in the susceptibility analysis of the well because they serve a single connection and are located outside of the sanitary setbacks required under the *Idaho Rules for Public Drinking Water Systems.*

Water Quality History.

Trestle Creek Inn, under regulation as a non-community transient public water system, is required to monitor quarterly for total coliform bacteria contamination. Total coliform bacteria were present in samples tested in September 2000, but were absent in follow up samples. The system failed to monitor during the spring quarter of 2000 and the winter quarter of 2001. Annual nitrate samples show concentration ranging from undetectable levels to 2.6 mg/l. The Maximum Contaminant Level (MCL) for nitrate is 10 mg/l.

Susceptibility to Contamination.

An analysis of the Trestle Creek Inn well, incorporating information from the public water system file and the potential contaminant inventory, ranked the well highly susceptible to microbial contamination. The location of the well in the flood plain, combined with unknown risks associated with well construction and local geology account for 9 of the 13 points marked against the well .The well is moderately susceptible to inorganic, volatile and synthetic organic chemical contamination. The ground water susceptibility worksheet for your well is on page 6 of this report. Formulas used to compute final scores and susceptibility rankings are at the bottom of the worksheet.

Source Water Protection.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Trestle Creek Inn drinking water protection activities should focus on maintaining and operating the well in full compliance with *Idaho Rules for Public Drinking Water Systems.* The height of the well casing above grade, 41 inches, exceeds regulatory requirements and provides some protection against flooding. As noted in the 2001 Sanitary Survey report it is necessary to seal exposed electrical connections to the well and to provide a watertight vented well cap in order to reduce pathways for contaminants to enter the ground water.

There are a number of voluntary measures a water system can employ to protect its drinking water source. Every system should have an emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website (www.state.id.us/deq/water/water1.htm) to guide systems through the emergency planning process. Adhering to a written maintenance and testing schedule helps ensure performance of necessary tasks in a timely manner.

It will be important to form partnerships with neighboring landowners and businesses to regulate activities that can degrade ground water quality. It might be helpful for the Inn to investigate a ground water protection program like Home*A*Syst. These programs are designed to help well owners assess everyday activities for their potential impact on drinking water quality. Topics include septic tank management, petroleum product storage, handling and storing lawn and household chemicals and similar subjects.

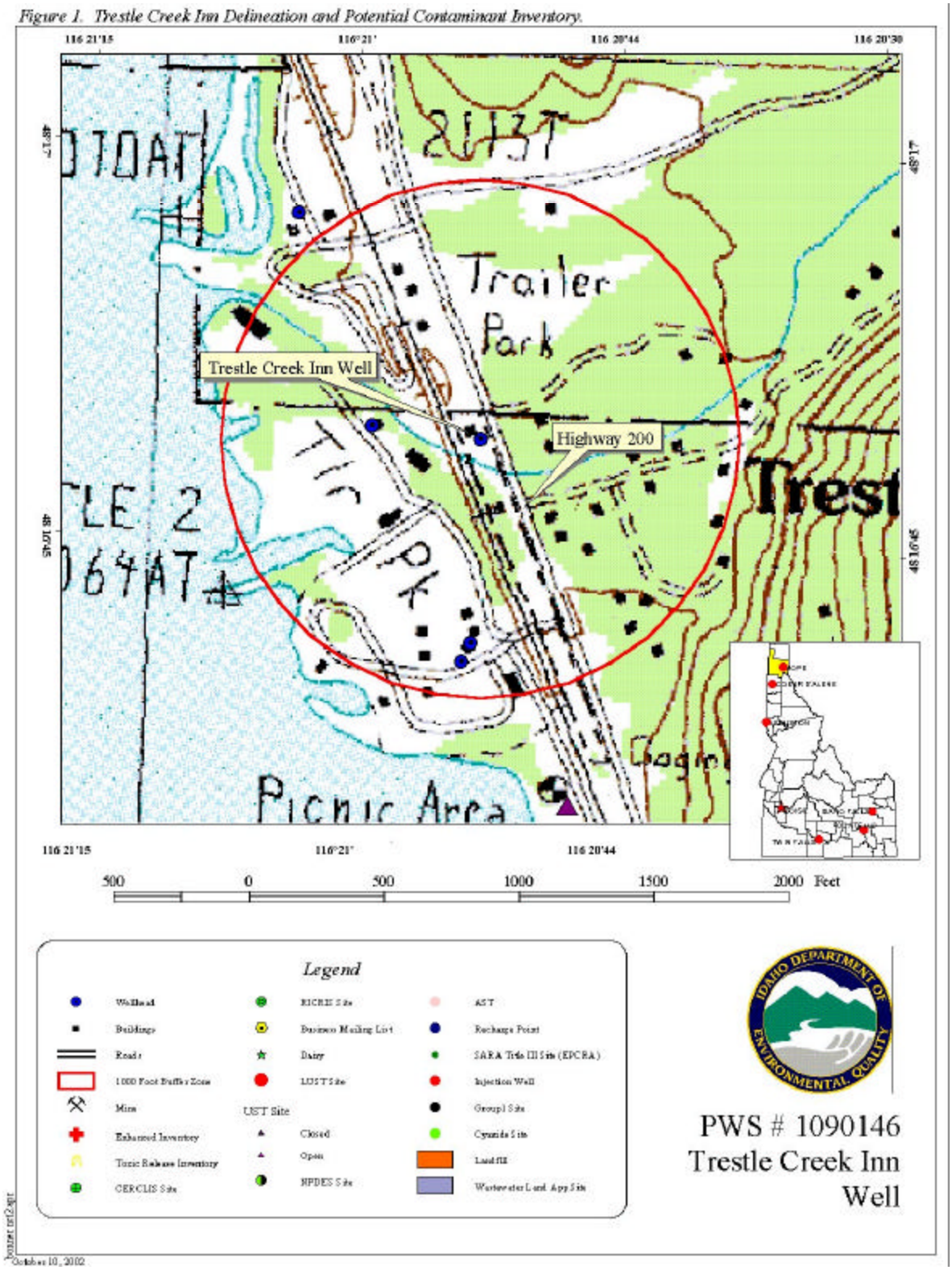
Assistance. Public water suppliers and users may call the following IDEQ offices with questions about this assessment and for help with drinking water protection planning.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: http://www.deq.state.id.us/deq/water/water1.htm

Figure 1. Trestle Creek Inn Delineation and Potential Contaminant Inventory.



Ground Water Susceptibility

Public Water System Name : **TRESTLE CREEK INN** Well : **WELL #1**

Public Water System Number : **1090146** 10/10/02 7:50:48 AM

1. System Construction		SCORE			
Drill Date	UNKNOWN				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2001				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	UNKNOWN	2			
Highest production 100 feet below static water level	UNKNOWN	1			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		**5**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	UNKNOWN	1			
Depth to first water > 300 feet	UNKNOWN	1			
Aquitard present with > 50 feet cumulative thickness	UNKNOWN	2			
Total Hydrologic Score		**6**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use		Score	Score	Score	Score
Land Use Zone	RECREATION/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Sanitary Setback	NO	NO	NO	NO	NO
Potential Contaminant Source/Land Use Score		**2**	**2**	**2**	**2**
Potential Contaminant / Land Use - 1000-FOOT RADIUS					
Contaminant sources present (Number of Sources)	YES. Transportation Corridor, Surface Water	1	1	1	2
(Score = # Sources X 2) 8 Points Maximum		2	2	2	4
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
1000-Foot Radius contains or intercepts a Group 1 Area	NO	0	0	0	0
Agricultural Land Use	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - 1000-Foot Radius		**3**	**3**	**3**	**4**
Cumulative Potential Contaminant / Land Use Score		**5**	**5**	**5**	**6**
4. Final Susceptibility Source Score		**12**	**12**	**12**	**13**
5. Final Well Ranking		Moderate	Moderate	Moderate	High

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

0 - 5 Low Susceptibility
6 - 12 Moderate Susceptibility
> 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ? Superfund? is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.